

CLAIMS

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1. In a wireless communications system, a method for a mobile station to determine proximity to a telephone, the method comprising:

5 a first mobile station determining its position;
the first mobile station receiving the position of a telephone;
and
the first mobile station calculating the distance to the
telephone.

10 2. The method of claim 1 further comprising:
the first mobile station determining its alignment in a
coordinate system; and
calculating the direction to the telephone.

15 3. The method of claim 1 further comprising:
the telephone determining a trust level that it has in the first
mobile station; and
wherein receiving the position of the telephone includes
20 receiving the position in response to the level of trust determined by the
telephone.

4. The method of claim 1 further comprising:
generating a request, to authorize the sending of the
25 telephone position; and

wherein receiving the position of the telephone includes receiving the position in response to the request being authorized.

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5 5. The method of claim 3 in which the first mobile station is connected to a global positioning satellite (GPS) receiver; and wherein determining the position of the first mobile station includes the first mobile station receiving data from the GPS receiver.

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10 6. The method of claim 5 in which the telephone is a second mobile station, connected to a GPS receiver, and the method further comprising:
the second mobile station receiving data from the connected GPS receiver; and
the second mobile station sending its position in response to
15 the data received from the connected GPS receiver.

7. The method of claim 6 further comprising:
the first mobile station sending a request for the position of the second mobile station; and
20 wherein the second mobile station sending of its position includes the second mobile station sending its position in response to the first mobile station position request.

8. The method of claim 7 wherein the second mobile
25 station sending of its position includes the second mobile station automatically sending its position in response to the request.

9. The method of claim 7 further comprising:
the second mobile station sending its position to the wireless
communications system;
5 the wireless communications system collecting and storing
the position of the second mobile station; and
wherein the first mobile station sending a request for the
position of the second mobile station includes sending the position request
to the wireless communications system; and
10 the method further comprising:
the wireless communications system sending the second
mobile station position to the first mobile station, in response to the
position request.

15 10. The method of claim 9 further comprising:
maintaining a record of trust relationships with the wireless
communication system; and
wherein determining the level of trust that the second mobile
station has in the first mobile station includes the wireless
communications system determining the trust level in response to
20 accessing the record of trust relationships.

25 11. The method of claim 10 further comprising:
establishing an emergency access code to the record of trust
relationships; and

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permitting the first mobile station to receive the position of the second mobile telephone in response to presenting the emergency access code to the wireless system.

5 12. The method of claim 7 wherein the first mobile station sends its request for the position of the second mobile station to the second mobile station; and

 wherein the second mobile station sends the second mobile station position to the first mobile station, in response to the request.

10 13. The method of claim 12 in which the second mobile station includes a memory, and further comprising:
 maintaining a record of trust relationships in the memory of the second mobile station; and
15 wherein determining the level of trust that the second mobile station has in the first mobile station includes the second mobile station determining the trust level in response to accessing the record of trust relationships.

20 14. The method of claim 1 further comprising:
 establishing a short message service (SMS) identity corresponding an SMS message to transmit and receive position requests and the transfer of position data; and
 wherein receiving the position of the telephone includes
25 receiving the position by SMS messaging.

15. The method of claim 1 wherein receiving the position of the telephone includes receiving the position by a general message and data network subscriber protocols including WAP and HTTP.

5 16. The method of claim 1 wherein the first mobile station receiving of the telephone position includes the first mobile station receiving the telephone position via an audio signal.

10 17. The method of claim 1 further comprising:
the first mobile station sending its position to the telephone.

18. The method of claim 17 further comprising:
determining the level of trust that the first mobile station has in the telephone; and
15 wherein the first mobile station sends its position to the telephone in response to the determined level of trust.

20 19. The method of claim 3 in which the telephone is a landline telephone associated with a service provider; and
the method further comprising:
creating a position record of the telephone with the service provider; and
wherein the first mobile station receiving of the position of the phone includes the first mobile station receiving the position from the
25 service provider.

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the first mobile station tracking the change in distance and direction to the telephone over the period of time.

24. The method of claim 1 further comprising:
5 following the receiving the telephone position,
communicating the position with presentations selected from the group
including audio signals and graphic displays.

25. In a wireless communications mobile station, a method
10 for a mobile station to determine its proximity to a telephone, the method
comprising:
a first mobile station determining its position;
the first mobile station receiving the position of a telephone;
and
15 the first mobile station calculating the distance to the
telephone.

26. The method of claim 25 further comprising:
the first mobile station determining its alignment in a
20 coordinate system; and
calculating the direction to the telephone.

27. The method of claim 25 in which the first mobile
station is connected to a global positioning satellite (GPS) receiver; and
25 wherein determining the position of the first mobile station
includes the first mobile station receiving data from the GPS receiver.

28. The method of claim 25 further comprising:
sending a request for the position of the telephone; and
wherein receiving the telephone position includes receiving
5 the telephone location in response to the request.

29. The method of claim 28 wherein sending the request
for the position of the telephone includes sending the request to the
telephone.

30. The method of claim 28 wherein sending the request
for the position of the telephone includes sending the request to the
telephone service provider.

31. The method of claim 25 further comprising:
establishing a short message service (SMS) identity
corresponding to an SMS message for the transfer of position data; and
wherein the first mobile station receiving of the position of
the telephone includes the first mobile station receiving the position by
20 SMS message.

32. The method of claim 25 wherein the first mobile
station receiving of the position of the telephone includes the first mobile
station receiving the position by a general message.

34. The method of claim 25 further comprising:
following the receiving the position of the telephone,
communicating the position with presentations selected from the group
including audio signals and graphic displays.

36. The method of claim 35 further comprising:
determining the level of trust that the first mobile station
has in the telephone; and
wherein the first mobile station sends its position to the
telephone in response to the determined level of trust.

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38. The method of claim 37 further comprising:
determining a trust level that the second mobile station has
in the first mobile station; and
wherein sending the second mobile station position to the
5 first mobile station includes sending the position in response to the
determined level of trust.

39. The method of claim 37 further comprising:
prior to automatically sending its position, creating a request
10 to authorize the sending of the telephone position; and
and wherein sending the position includes sending the
position in response to the request being authorized.

40. The method of claim 37 in which the second mobile
15 station is connected to a global positioning satellite (GPS) receiver, and
the method further comprising:
the second mobile station determining its position from the
GPS receiver data; and
wherein the second mobile station sending of its position to
20 the first mobile station includes the second mobile station sending its
position in response to data received from the GPS receiver.

41. The method of claim 38 in which the second mobile
station has a memory, and further comprising:
25 maintaining a record of trust relationships in the memory of
the second mobile station; and

wherein determining the level of trust level that the second mobile station has in the first mobile station includes the second mobile station determining the level of trust by accessing the record of trust relationships in memory.

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~~42.~~ The method of claim 37 further comprising:
the first mobile station determining its own position;
the second mobile station receiving the position of the first
mobile station; and
10 the second mobile station calculating the distance to the first
mobile station.

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~~43.~~ The method of claim 42 further comprising:
the second mobile station determining its alignment in a
15 coordinate system; and
calculating the direction to the first mobile station.

~~44.~~ The method of claim 42 further comprising:
prior to receiving the position of the first mobile station,
20 requesting the position of the first mobile station.

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~~45.~~ The method of claim 37 further comprising:
establishing a short message service (SMS) identity
corresponding to an SMS message for transmitting and receiving the
25 request for position and sending of position data; and

wherein sending the position includes sending the position by SMS messages.

46. The method of claim 37 wherein sending the position of the telephone includes sending the position by a general message and data network subscriber protocols including WAP and HTTP.

47. The method of claim 37 wherein sending the position of the telephone includes sending the position by an audio voice signal.

48. In a wireless communications system, a mobile station capable of determining its distance from another telephone, the system comprising:

a first mobile station having an input for receiving data to determine its own position and an port to request the position of a telephone;

a telephone having a position, which is automatically sent to the first mobile station in response to the request for position; and

wherein the first mobile station determines the distance to the telephone in response to receiving the telephone position.

49. The system of claim 48 further comprising:
a first global positioning satellite (GPS) receiver connected to the first mobile station to supply the first mobile station position.

50. The system of claim 48 wherein the telephone is a second mobile station.

51. The system of claim 50 further comprising:
5 a second GPS receiver connected to the second mobile station to supply the second mobile station position.

52. The system of claim 50 wherein the second mobile station includes a memory of trust relationships, and wherein the second
10 mobile station sends its position in response to accessing the memory to determine the level of trust with the first mobile station.

53. The system of claim 50 wherein the second mobile station creates a request, addressed to the second mobile station user,
15 authoring the sending of its position.

54. The system of claim 50 further comprising:
a position control module connected to the wireless system to collect and store the position of the second mobile unit, and automatically
20 send the second mobile station position to the first mobile station in response to requests from the first mobile station.

55. The system of claim 54 further comprising:
a trust relationship storage module connected to the position
25 control module and accessed by the position control module to determine

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mobile stations sends its position in response to accessing the memory to determine the second mobile station level of trust.

62. The system of claim 48 wherein the telephone is a
5 landline telephone, and further providing:
a landline telephone service provider including:
a position control module that collects and stores the position
of the landline telephone and automatically sends the position to the first
mobile station in response to requests from the first mobile station.

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63. The system of claim 62 further comprising:
a trust relationship storage module connected to the position
control module and accessed by the position control module to determine
the level of trust that the landline telephone has in the first mobile
15 station, before its position is sent to the first mobile station.

64. The system of claim 63 wherein the landline telephone
receives an authorization request from the service provider to send its
position to the first mobile station; and
20 wherein the service provider sends the landline telephone
position in response to the authorization request.

65. The system of claim 63 wherein the position control
module is accessed through a dedicated telephone number; and

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wherein the first mobile requests the position of the telephone directly from the service provider by dialing the dedicated telephone number to access the position control module.

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